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TO BUILD THE FUTURE

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ABOUT DABEER S.A.

DABEER 'S HEAD OFFICE IS LOCATED IN THE CITY OF BARBERÀ DEL VALLES A 16 KM FROM BARCELONA (SPAIN). IN THE YEAR 1992, AFTER 28 YEARS OF CONTINUOUS GROWTH, THE COMPANY MOVED ITS PRODUCTION CENTRE TO THE INDUSTRIAL ESTATE SANTIGA DE SANTA PERPETUA WHERE S.A. DABEER HAS A PLOT OF 17,500 SQUARE METERS.

Our clients include over 400 companies world-wide. In many countries S.A. DABEER counts on the collaboration of representing companies. The growth of the company, as well as that of its representatives, has been possible thanks to the effort carried out in the search for new markets, new applications, in offering quality products and to S.A. DABEER's wish to transmit the technical knowledge of our products and their applications to our clients and representatives – this latter task carried out by our technical department.

In 1999 S.A. DABEER obtained the quality certificate UN-EN-ISO 9001 reaffirming the commitment acquired with its clients to satisfy their needs and expectations of the future.

This quality system has become a work philosophy: internally with the creation, improvement and maintenance of the working conditions necessary to stimulate all employees to strive for the continuous enhance of the quality of our work and products, and externally because SA DABEER's suppliers and representatives has understood the importance of collaborating in this system of quality and they are helping us to create added value acknowledged world-wide.

Since the beginning S.A. DABEER has believed in the importance in participating in research and development projects with the objective of continuously improving our products and manufacturing processes in order to adapt to the new trends and needs of the market, protecting the environment and offering to the clients quality products at a reasonable cost. The company has dedicated human resources and capital to this end. Research into biodegradable products and the incorporation of new products requested by our clients are part of our bet for the future.



OUR SERVICES

S.A. DABEER WORKS FOR SUPPLY TO ITS CUSTOMERS A GOOD SERVICE AND QUALITY PRODUCTS

The presence of metal ions, even in traces, is enough to alter the physical and chemical properties of a product or process. For example the presence of copper or iron for instance, act as oxidation catalysts on fats and oils (rancidification); traces of heavy metals will also reduce the effectiveness of bleaching agents. Water used in appliances such as: heat exchangers or evaporators causes problems due to the effect of calcium and magnesium that act as precipitant agents on the metal surfaces and thus lead to a loss of effectiveness and life shortening the apparatus. To solve these problems DABEER has developed the DABEERSEN range of products. These products are chelate agents, molecules containing amino and carboxylic groups.

ALWAYS CLOSE TO OUR CUSTOMERS

- * Our Technical and Commercial people work closely to our customers in order to solve their concerns and to provide them the best option within the S.A. DABEER product range.
- * We design personalized products as response of our customers particular issues, both in the sequestering agents field, as in the agriculture applications scope.
- * S.A. DABEER is specially committed with the growth of the Company according to our customers needs, offering a quick and professional response.
- * We are fully involved in the legislative changes concerning our products in order to achieve a high level of satisfaction of our customers.



WALKING WITH YOU

TO BUILD THE FUTURE



PRODUCTS

CHELATING AGENTS

S.A. DABEER PRODUCES A LARGE RANGE OF SEQUESTERING AGENTS AND CHELATED MICRONUTRIENTS SINCE ITS FOUNDATION

EDTA

DABEERSEN H TECNICO

ETHYLENEDIAMINETETRACETIC ACID

Powder
EDTA 99%

DABEERSEN NA₂ HQ

DISODIUM SALT DIHYDRATE (EP & FCC)

Powder
EDTA Na₂ 99%

DABEERSEN NA₄ 40%L

TETRASODIUM SALT

Aqueous solution
EDTA Na₄ 40%

EGTA

DABEERSEN EGTA NH₄

EGTA TRIAMMONIUM SALT

Aqueous solution
EGTA (NH₄)₃ 37%

DABEERSEN H₄ HQ

ETHYLENEDIAMINETETRACETIC ACID (EP & BP)

Powder
EDTA 99%

DABEERSEN NA₄ C₂

TETRASODIUM SALT DIHYDRATE PURE

Powder
EDTA Na₄ 99%

DABEERSEN NH₄

TETRAAMMONIUM SALT

Aqueous solution
EDTA (NH₄)₄ 46,8%

HIDA

DABEERSEN HIDA

HYDROXYETHYL-IMINEDIACETIC ACID DISODIUM SALT

Aqueous solution
HIDA Na₂ 27,5%

DABEERSEN NA₂ TECNICO

DISODIUM SALT DIHYDRATE

Powder
EDTA Na₂ 99%

DABEERSEN NA₄ TD

TETRASODIUM SALT

Powder
EDTA Na₄ 94%

CDTA

DABEERSEN CDTA HQ L

TRANS CDTA TRIAMMONIUM SALT

Aqueous solution
CDTA (NH₄)₃ 37%

DHEG

DABEERSEN FE1

N,N-DI-(HYDROXYETHYL) GLYCINE SODIUM SALT

Aqueous solution
DHEG 40%

HGA

DABEERSEN 284

GLUCOHEPTONIC ACID SODIUM SALT DIHYDRATE

Powder
HGA Na 96%

DABEERSEN 284 LC

GLUCOHEPTONIC ACID SODIUM SALT

Clear Aqueous solution
HGA Na 35%

MGDA

DABEERSEN MDS

METHYLGLICINE DIACETIC ACID TRISODIUM SALT

Aqueous solution
MGDA Na₃ 40%

HEDTA

DABEERSEN FE3

HYDROXYETHYLETHYLENDIAMINE-TRIACETIC ACID TRISODIUM SALT

Aqueous solution
HEDTA Na₃ 40%

DABEERSEN 284 B

GLUCOHEPTONIC ACID SODIUM SALT DIHYDRATE

White Powder
HGA Na 99%

DTPA

DABEERSEN 503

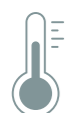
DIETHYLENTRIAMINEPENTAACETIC ACID PENTASODIUM SALT

Aqueous solution
DTPA Na₅ 40%

DABEERSEN 284 L

GLUCOHEPTONIC ACID SODIUM SALT

Aqueous solution
HGA Na 35%



STABLE AT HIGH TEMPERATURES



INERT TO MOST CHEMICAL AND BACTERIAL AGENTS



SOLUBLE IN WATER



FORMS STABLE CHELATES WITH MOST METALLIC IONS



STABLE CHELATES IN A WIDE RANGE OF PH



HYDROLYTIC STABILITY IN AN ACID AND ALKALINE CONDITIONS

Chelate" is derived from the Greek "CHELE" meaning crab or lobster claw. In these complexes the metal atom is trapped in the structure of the compound by various atoms of the chelate or sequestering agent and from which they are difficulty released by other substances

DETERGENCY

PRODUCTS USED IN THIS APPLICATION

PHOSPHONATES

SEQUION 10H60 (HEDP) Liquid 60% active acid HEDP	SEQUION 10Na2Liq (HEDP) Liquid 17% active acid HEDP Na	SEQUION 10Na430 (HEDP) Liquid 21% active acid HEDP 4Na
SEQUION 10NaPdr (HEDP) Powder 68% active acid HEDP Na	SEQUION 10Na6 (HEDP) Granule 68% active acid HEDP Na	SEQUION 10Na46 (HEDP) Granule 60% active acid HEDP 4Na
SEQUION 20H45 Polvo 68% active acid ATMP	SEQUION 10Na Pdr (HEDP) Polvo 68% active acid HEDP Na	SEQUION 10Na46 (HEDP) Polvo 68% active acid HEDP 4Na
SEQUION 20H45 (ATMP) Liquid 50% active acid ATMP	SEQUION 20Na38 (ATMP) Liquid 38% active acid ATMP Na	SEQUION D30 (EDTMP) Liquid 25% active acid EDTMP Na
SEQUION 30N (EDTMP) Liquid 23% active acid EDTMP Na	SEQUION CS30 (EDTMP) Granule 34% active acid EDTMP Ca/Na	SEQUION 40H50 (DTPMP) Liquid 60% active acid DTPMP
SEQUION 40PN47 (DTPMP) Liquid 47% active acid DTPMP xNa	SEQUION 40Na32 (DTPMP) Liquid 25% active acid DTPMP Na	SEQUION 40Na32C (DTPMP) Liquid 32% active acid DTPMP Na
SEQUION CLR (CLORHIDE STABILIZATION) Liquid, 45% active acid CLORHIDE STABILIZATION	SEQUION CLR Pdr (CLORHIDE STABILIZATION) Powder, 95% active acid CLORHIDE STABILIZATION	

PHOSPHONIC POLYMERS

HYDRODIS WP 56 Liquid 50% active acid LAUNDRY	HYDRODIS WP 56P Liquid 35% active acid LAUNDRY	HYDRODIS WP 56N Liquid 25% active acid LAUNDRY
HYDRODIS LW 3875 Liquid 25% active acid LAUNDRY	HYDRODIS LWG Powder 43% active acid LAUNDRY	HYDRODIS WP 56S Liquid 50% active acid BOTTLE WASHING
HYDRODIS WP 562 Liquid 50% active acid CAR WASHING	HYDRODIS WP 562P Liquid 35% active acid CAR WASHING	HYDRODIS WP 562N Liquid 25% active acid CAR WASHING
BGB PC 3481 Powder 50% active acid CAR WASHING	HYDRODIS ADW 3814N Liquid 25% active acid DISHWASHING	HYDRODIS WP 56G Granule 45% active acid DISHWASHING

WATER TREATMENT

PRODUCTS USED IN THIS APPLICATION

PHOSPHONATES

SEQUION WTA 100 (HEDP) Liquid HEDP	SEQUION WTA 100N (HEDP) Liquid HEDP Na	SEQUION WTA 102N (HEDP) Liquid HEDP 2Na
SEQUION WTA 102Pdr (HEDP) Powder HEDP 2Na	SEQUION WTA 103NG (HEDP) Granule HEDP 2,6Na	SEQUION WTA 104NG (HEDP) Granule HEDP 4Na
SEQUION WTA 200 (ATMP) Liquid ATMP	SEQUION WTA 200N (ATMP) Liquid ATMP Na	SEQUION WTA 300N (EDTMP) Liquid 25% active acid EDTMP Na
SEQUION WTA 400 (DTPMP) Liquid 50% active acid DTPMP	SEQUION WTA 400PN (DTPMP) Liquid 47% active acid DTPMP xNa	SEQUION WTA 400N (DTPMP) Liquid 25% active acid DTPMP Na
SEQUION WTA 500K (OTHERS) Liquid 23% active acid HEMDTMP-K	SEQUION WTA 600 (OTHERS) Liquid 60% active acid HEMPA	SEQUION WT CL (CLORHIDE STABILIZATION) Liquid, 45% active acid ATMP modif
SEQUION WT CL (CLORHIDE STABILIZATION) Powder, 95% active acid ATMP modif	SEQUION WTC 0759 (SPECIALITIES) Liquid, 50% active acid, Without clorhides PHA	SEQUION WTC 0762 (SPECIALITIES) Liquid 50% active acid, Corrosion inhibitor PHA

PHOSFONIC POLYMERS

HYDRODIS CS Scale Inhibitor Liquid, 50% active acid PPH-HighMW	HYDRODIS CSP Scale Inhibitor Liquid, 35% active acid PPH Na	HYDRODIS CSN Scale Inhibitor Liquid, 25% active acid PPH Na
HYDRODIS CSW Without clorhides Liquid, 50% active acid PPH	HYDRODIS QT Without clorhides Liquid, 50% active acid PPH-LowMW	HYDRODIS QTP Scale Inhibitor Liquid, 35% active acid PPH Na
HYDRODIS GTN Scale Inhibitor Liquid, 25% active acid PPH Na	HYDRODIS RO 859 Scale Inhibitor for Reverse Osmose Liquid PPH Na	HYDRODIS RO 1201 Scale Inhibitor for Reverse Osmose Liquid PPH Na
HYDRODIS PM 797 Scale inhibitor without phosphorous Liquid, 50% active acid PMA Na	HYDRODIS PM 1096 Scale inhibitor without phosphorous Liquid, 34% active acid PAC	HYDRODIS AGR 100 Scale inhibitor for ferti and microirrigation Liquid

AGRICULTURE

PRODUCTS USED IN THIS APPLICATION

IRON CHELATES

DABIRON HA 6% Fe EDDHA Iron chelate, microgranule with 6% Fe (4% Fe o-o) EDDHA-Fe	DABIRON HA Plus EDDHA Iron chelate, microgranule with 6% Fe (4.8% Fe o-o) EDDHA-Fe	DABIRON HS 6% Fe EDDHA Iron chelate, microgranule with 6% Fe EDDHA-Fe
DABIRON NUK 6% Fe EDDHA Iron chelate, microgranule with 6% Fe K ₃ EDDHA-Fe	KELANTREN 520 Fe EDDHA Iron chelate, liquid with 2,5% Fe EDDHA-Fe	DABIRON SG 6% Fe EDDHA-Fe plus HGA-Fe, microgranule with 6% Fe EDDHA-Fe+HGA-Fe
DABIRON HEDTA Fe 9% P EDTA Iron salt, powder with 9% Fe HEDTA-Fe	DABEERSEN NaFe EDTA Iron Sodium salt 13% Fe trihydrate, powder EDTA NaFe	DABEERSEN FeN 50% Complex of Magnesium HGA microgranule 11.0% MgO HGA-Mg
DABIRON HEDTA Fe 4,5% L HEDTA Iron salt, Liquid with 4,5% Fe HEDTA-Fe		

CHELATED MICRONUTRIENTS (WITH EDTA)

DABQUELAN Mn P EDTA Manganese Disodium salt 13% Mn, microgranule EDTA NA2MN	DABQUELAN Mn 6% L EDTA Manganese Dipotassium salt 6% Mn, liquid EDTA K2MN	DABQUELAN Zn P EDTA Zinc Disodium salt 15% Zn, microgranule EDTA NA2ZN
DABQUELAN Zn N EDTA Zinc Diammonium salt 9% Zn, liquid EDTA (NH4)2ZN	DABQUELAN Cu P EDTA Copper Disodium salt 15% Cu, microgranule EDTA NA2CU	DABQUELAN Cu N EDTA Copper Diammonium salt 9% Cu, liquid EDTA (NH4)2CU
DABQUEL Na2 Mg EDTA Magnesium Disodium salt 3% Mg, liquid EDTA NA2MG	DABQUEL Mg P EDTA Magnesium Disodium salt 6% Mg, microgranule EDTA NA2MG	DABQUEL Ca EDTA Calcium Disodium salt 10% Ca, powder EDTA NA2CA

MIXTURES OF CHELATED MICRONUTRIENTS

DABQUEL-MIX 31 Mixture of Chelated Fe, Mn, Zn, Cu, Co, B and Mo, liquid HEDTA-EDTA	DABQUEL-MIX 32 Mixtures of Chelated Mn, Zn, Cu, Co, B and Mo, liquid EDTA	DABQUEL-MIX 33 Mixture of Chelated Fe, Mn, Zn, Cu, Co, B and Mo, liquid EDTA
DABQUEL-MIX 65 P Mixture of Chelated Fe, Mn, Zn, Cu, B and Mo, microgranule EDTA-HGA	DABQUEL-MIX 69 P Chemical mixture of chelated Fe, Mn, Zn, Cu, B and Mo EDTA-HGA-EDDHA	DABIRON HA MZ 10 Chemical mixture of chelated Fe, Mn, Zn, Cu, microgranule EDDHA- EDTA

COMPLEXED MICRONUTRIENTS (WITH HGA)

DABQUEL Complex Fe L Complex of Iron HGA aqueous solution 4,5% Fe HGA-Fe	DABQUEL Complex Mn L Complex of Manganese HGA aqueous solution 5.0% Mn HGA-Mn	DABQUEL Complex Zn L Complex of Zinc HGA aqueous solution 6.0% Zn HGA-Zn
DABQUEL Complex Ca L Complex of Calcium HGA aqueous solution 8.4% CaO HGA-Ca	DABQUEL Complex Mg L Complex of Magnesium HGA aqueous solution 4.2% MgO HGA-Mg	DABQUEL Complex Fe P Complex of Iron HGA microgranule 12.0% Fe HGA-Fe
DABQUEL Complex Mn P Complex of Manganese HGA microgranule 13.0% Mn HGA-Mn	DABQUEL Complex Zn P Complex of Zinc HGA microgranule 15.0% Zn HGA-Zn	DABQUEL Complex Cu P Complex of Copper HGA microgranule 13.0% Cu HGA-Cu
DABQUEL Complex Mg P Complex of Magnesium HGA microgranule 11.0% MgO HGA-Mg		

MIXTURES OF COMPLEXED MICRONUTRIENTS

DABQUEL Complex 100 P Mixture of HGA's Fe, Mn, Zn, Cu, B and Mo microgranule HGA	DABQUEL Complex 300 P Mixture of HGA's Mn and Zn microgranule HGA	DABQUEL Complex 101 L Mixture of HGA's Fe, Mn, Zn, Cu, B and Mo solution HGA
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COSMETICS

PRODUCTS USED IN THIS APPLICATION

PHOSPHONATES

SEQUION BS 10 Liquid 60% active acid HEDP	SEQUION BS 1012 Liquid 17% active acid HEDP Na	HEDP SEQUION BS 1014 G Granule 60% active acid HEDP 4Na
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LIPOSOLUBLE CHELATING AGENT

LIPOKEL Chelating agent to stabilize oils, fats, fragrances Liquid, 45% active acid
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AREAS AND APPLICATIONS

THE SEQUESTERING AGENTS AND CHELATED MICRONUTRIENTS ARE USED IN A SEVERAL APPLICATIONS, S.A. DABEER IS PRESENT IN ALL THESE MARKETS

FOOD

Metal traces degrade food products. These metals come from the manufacturing process or are even present in the food itself.

The presence of iron or copper catalyses the oxidation of fats and oils, DABEERSEN Na₂Ca prevents all these unwanted reactions through deactivating the metals. This product has been officially authorised as an EEC food additive (Directive N° 95/2/EC) in sauces, vegetables, mushrooms, tinned fish and

CHEMICAL ANALYSIS

There is a very wide range of applications for chelating agents in chemical analysis. These are used in gravimetric analysis with the chelate agent acting as a mask.

EDTA is used in a wide number of compleximetric and potentiometric titration. It has also been used in separating metals in exchanging ionic resins and has been applied with success in separating lanthanide and actinide.

PHOTOGRAPHY

DABEERSEN products are used in photography to avoid the formation of turbidities and foams in the development bath and the oxidation of the developing liquid.

The DABEERSEN NaFe and FeN iron salts are employed in hardening-fixing baths to oxidise the silver and to remove it from the photographic film. The DABEERSEN chelates prevent the precipitation of metallic compounds and increase the iron reactivity versus the silver.

WATER TREATMENT

Those processes, which use water whether as processing or heat exchange medium are susceptible of suffer scaling problems.

Boilers, Heat exchangers, Evaporators, cooling towers, wood pulp digesters or filter cloths are some examples of equipment affected. The use of chelating agents as DABEERSEN products, are effective to remove and prevent scale formation in operating boilers.

PAPER

In cellulose pulp manufacturing, the presence of metallic ions derived from the water or from the wood itself, lowers the effectiveness of the bleaching agents.

In the TCF (Total Chlorine Free) process for cellulose pulp, it is essential to eliminate all the metal impurities (principally manganese and iron) which catalyse the decomposition of hydrogen peroxide. To do so, DABEERSEN 503 (sodium DTPA salt) is used as chelating agent.

DETERGENTS

Hard water and the presence of heavy metals cause the appearance of precipitants, change of colour and rancidification in detergents.

The application of DABEERSEN Na₄ L 40% and DABEERSEN MDS Plus prevents these problems and stabilises the essences employed in detergents and improves the cleaning performance.

COSMETICS

All cosmetic products contain ingredients that are sensitive to metallic ion traces. After some time, this leads to the appearance of turbidity, change of colour and smell, etc.

These irregularities may be prevented by adding DABEERSEN chelate agents. By adding small quantities of DABEERSEN 503 we may prevent the rancidification and discoloration in soaps and creams with high lanolin content.

PHARMACY

Metal traces produce unwanted effects in pharmaceutical product manufacturing: oxidation, changes of colour, precipitation, etc.

All of these problems are eliminated through use of DABEERSEN sequestering agents. They are used in vitamins, in treatment for metal poisoning, to restore haemoglobin, and in medicine.

METAL TREATMENT

Chelate agents are used in metal electroplating as they allow more homogeneous and pure metal deposits.

Likewise, chelate agents are used in metallurgy: one method of separating ore from the dregs is that of flotation. The application of a chelate agent such as HGA restores the hydrophobic properties of the ore and permits a selective separation of its components.

TEXTILE INDUSTRY

The use of chelating agents in all textile processes is very important as these control the presence of metallic ions.

The application of DABEERSEN chelates eliminates the metal impurities which precipitate during the washing stages and also be employed during the bleaching process as this prevents the break down of bleaching peroxides.

POLYMERS

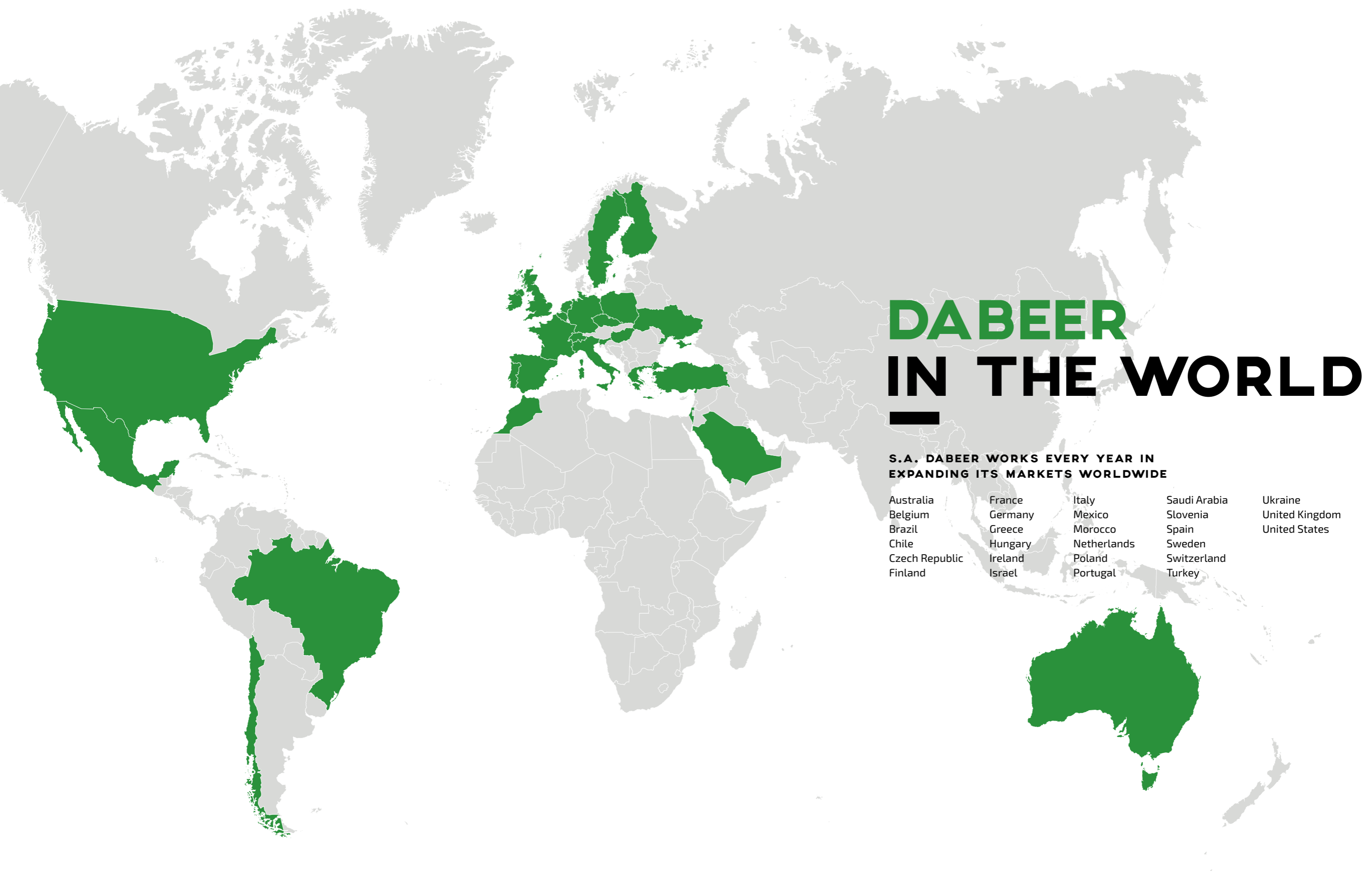
The DABEERSEN chelating agents eliminate the metal impurities which affect the stability and physical properties of polymers.

DABEERSEN is employed in the building up of PVC to prevent the metallic traces which negatively affect the properties of polymers.

AGRICULTURE

The increase in the amount of cultivation use per hectare causes a rapid exhaustion of soil nutrients.

To prevent and correct these deficiencies, S.A. DABEER offers a full range of micronutrient chelates and complexes: DABIRON, DABQUEL, DAQUEL MIX and DABQUEL COMPLEX products.



DABEER IN THE WORLD

**S.A. DABEER WORKS EVERY YEAR IN
EXPANDING ITS MARKETS WORLDWIDE**

- | | | | | |
|----------------|---------|-------------|--------------|----------------|
| Australia | France | Italy | Saudi Arabia | Ukraine |
| Belgium | Germany | Mexico | Slovenia | United Kingdom |
| Brazil | Greece | Morocco | Spain | United States |
| Chile | Hungary | Netherlands | Sweden | |
| Czech Republic | Ireland | Poland | Switzerland | |
| Finland | Israel | Portugal | Turkey | |



**SINCE
-1964-**

OUR HISTORY

THE INITIAL CAPITAL WAS UNDERWRITTEN
BY JOSÉ M^o AIZCORBE, ANTONIO BADRINAS
Y ROBERTO CELADES

From its foundation S.A. DABEER has been dedicated to the manufacturing of Sequestering Agents and Chelated Micronutrients. In the year 1985 the company signed a representation contract with the Italian firm GIOVANNI BOZZETTO S.p.a. to commercialise its range of phosphonates SEQUION in Spain and Portugal.